

REMARKS/ARGUMENTS

Applicants thank Examiners Uselding and Eashoo for the courtesy of an interview extended to Applicants' representative on September 16, 2008. During the interview, *Zemaitis* was discussed as well as the open-ended nature of the process of claim 1. Additionally, an amendment to claim 1 that changes the wax composition to "consisting essentially of" to distinguish *Zemaitis*' required presence of an additive (i.e. polyvalent-metal soap) was discussed. Arguments similar to those discussed are presented below.

Claim Status

Claims 1-30 are pending. Claims 6-30 are withdrawn due to a previous Restriction Requirement. Claim 1 is currently amended and finds support in the specification: Examples 1-1 to 1-4; page 6, lines 14-16; and page 8, lines 30-31. No new matter has been entered.

Claims 1-5 are rejected under 35 U.S.C. §102(b) as anticipated by *Zemaitis* (US 2,375,162). Applicants respectfully traverse this rejection.

Background

Compositions mainly comprising a wax, such as moisture-proof coatings, have been typically prepared by mechanically mixing constituent components in their molten state or mixing a wax emulsion with other components. However, these techniques can involve the following problems.

When a solid or high-viscous substance is mixed into a wax by mechanically mixing in a molten state, it can be difficult to uniformly disperse the components because the viscosity of the molten wax is so low that sufficient shear force is not exerted on the components to be mixed up.

In using a wax emulsion, it can be difficult to disperse a component whose particle

size is equal to or smaller than that of the component constituting the emulsion, which has made it difficult to obtain a uniform disperse system.

A method using a solvent can involve smell and safety problems caused by residual solvent in an intermediate or final product. The use of a large quantity of solvent also gives adverse influences on the natural environment and the working environment. In recent years, residual solvents in lamination adhesives, printing inks, etc. used in food packaging materials have been of concern for influences on human bodies.

Additionally, waxes having high melting points can be hard to dissolve in a solvent and are therefore difficult to formulate into a uniform composition. When a component to be mixed is a solvent-insoluble substance (e.g., inorganic particles), it can be difficult to thoroughly disperse due to insufficient force applied to the component. Where there is a difference in specific gravity between a wax and a component being mixed, the component can settle down, resulting in uneven concentration.

In light of the above-described problems, the claimed invention provides a wax composition, which can have a uniformly dispersed constituent component, at low cost and may be processed free from residual solvent.

***Zemaitis* Does Not Anticipate or Render Obvious Applicants' Claims**

Zemaitis discloses a thermoplastic composition comprising a wax, a rubber and a polyvalent-metal soap (col. 1, line 54, to col. 2, line 1). More specifically, *Zemaitis* discloses numerous times that the polyvalent-metal soap is required "in order to readily disperse the rubber in the wax medium" and that the "soap should be at least 5 parts per 100 parts of rubber" (col. 2, lines 22-26; Examples 1 and 2; claims 1-4). Therefore, it is clear that the polyvalent-metal soap is an essential component of the composition as disclosed by *Zemaitis*.

In contrast to *Zemaitis*, Applicants' process requires that the wax composition consist essentially of a wax and a component to be mixed with the wax selected from the group consisting of a polymer, an inorganic powder and a starch (see claim 1). Therefore, in accordance with M.P.E.P. 2163, Part II.A.1, which states:

By using the term 'consisting essentially of,' the drafter signals that the invention necessarily includes the listed ingredients and is open to unlisted ingredients that do not materially affect the basic and novel properties of the invention. A 'consisting essentially of' claim occupies a middle ground between closed claims that are written in a 'consisting of' format and fully open claims that are drafted in a 'comprising' format." *PPG Industries v. Guardian Industries*, 156 F.3d 1351, 1354, 48 USPQ2d 1351, 1353-54 (Fed. Cir. 1998).

Applicants submit that the addition of a polyvalent-metal soap to the claimed wax composition during processing would materially affect the basic and novel properties of the claimed invention. This is evidenced by *Zemaitis* itself which repeatedly indicates the necessity of the polyvalent-metal soap to disperse the rubber in the wax medium; therefore, the soap "materially affects the basic and novel properties of the invention" because without the soap, *Zemaitis* would not be able to obtain a uniform dispersion of rubber in wax.

Since the wax composition as processed by Applicants' method is limited to those ingredients listed (i.e., wax and a component selected from polymer, inorganic powder and starch) and unlisted ingredients that do not materially affect the basic and novel properties of the invention, Applicants' wax composition can **not** be processed in the presence of a polyvalent-metal soap. Accordingly, *Zemaitis*' composition that requires the presence of a polyvalent-metal soap can not be anticipatory of Applicants' method in which processing of the wax composition excludes a polyvalent-metal soap (via the absence of a polyvalent-metal soap in the positive recitation of the elements of the Markush group of the component to be mixed with the wax).

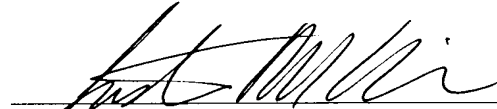
Moreover, Applicants' method in which polyvalent-metal soap is excluded from the processing of the wax composition is non-obvious in view of *Zemaitis* which identifies the use of a polyvalent-metal soap as essential (see above discussion).

Conclusion

For the reasons discussed above, Applicants submit that all now-pending claims are in condition for allowance. Applicants respectfully request the withdrawal of the rejections and passage of this case to issue.

Respectfully submitted,

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